

originally provided in the specification with a version placing the sequence listings in proper form. This submission includes no new matter.

CONCLUSION

Accordingly, Applicants submit that application is now in condition for allowance. A Notice of Allowance is requested, and a prompt mailing thereof would be much appreciated.

Should the Examiner have any questions concerning this communication, he is welcome to contact the undersigned attorney at (650) 330-0900.

Respectfully submitted,

By: \_\_\_\_\_

*Mark A. Wilson*

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Registration No. 43,275

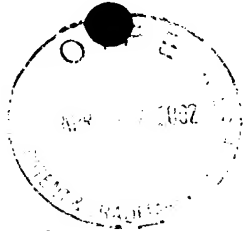
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Attorney Docket No. 2000-0007  
U.C. Docket No. B02-016  
Serial No. 10/006,909



APPENDIX A

SEQUENCE LISTING



## SEQUENCE LISTING

<110> KEASLING, JAY  
MARTIN, VINCENT  
PITERA, DOUGLAS  
KIM, SEON-WON  
WITHERS III, SYDNOR T.  
YOSHIKUNI, YASUO  
HEWMAN, JACK  
KHILEBNIKOV, ARTEM VALENTINOVICH

<120> BIOSYNTHESIS OF ISOPENTENYL PYROPHOSPHATE

<130> 1000-0007

<140> 10/006,909

<141> 2001-12-06

<160> 14

<170> PatentIn Ver. 2.1

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<211> 1185

<212> DNA

<213> Artificial Sequence

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<221> Description of Artificial Sequence: Synthetic  
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accgcgcgaa	acgtggctaa	agagtaagga	attacccgtg	aaatgcagga	tgaactggcg	540
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<210> 1

<211> 1476

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
HMG-CoA synthase nucleotide sequence

&lt;400&gt; 2

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gaacaaaaaa ccagacotca aaatgtcggg attaaaggta tccaaattta catcccaact 180
caatgtgtca accaatctga gctagagaaa ttgatggcg tttctcaagg taaatacaca 240
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gggtggtacca acgogtttgt caactctttg aactggattg aatctaacgc atgggatggg 540
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acgggtgggt cgggtactgt tgcctatgtg atcgggtcctg atgctccaat tgtatttgac 660
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&lt;210&gt; 3

&lt;211&gt; 1509

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
HMG-CoA reductase nucleotide sequence

&lt;400&gt; 3

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agcttggtata agaaaatacg tcttttagaa gaattagaag cattattaag tagtggaat 180
acaaaacaat tgaagaacaa agaggtcgct gccttggtta ttcacggtaa gttacctttg 240
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ctttcaattt tggcagaagc tctgtatta gcattctgat gtttaccata taaaaattat 360
gactacgacc gcgtatttgg cgcttggtgt gaaaatgtta taggttacat gcctttgcc 420
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attaaaaaag ctttttaact tacatcaaga ttgcaagtc tgcacatat tcaaaattgt 720
ctagcaggag atttactctt catgagattt agaacaacta ctggtgacgc aatgggtatg 780
aatatgattt ctaaagggtg cgaatactca ttaaagcaaa tggtagaaga gtatggctgg 840
gaagatatgg aggttgctct cgtttctggt aactactgta ccgacaaaaa accagctgoc 900

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```

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ttagtgacag ctgttttctt ggcattagga caagatcctg cacaaaatgt tgaaggttcc 1140
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gcgggcatt tgggtcaaa tagtatgac cacaacagga aacctgctga accaacaaaa 1440
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aatcctaa                                     1509

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<210> 4

<211> 1332

<212> DNA

<213> Artificial Sequence

<220>

<221> Description of Artificial Sequence: Synthetic  
Mevalonate kinase nucleotide sequence

<400> 4

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ataagcagat catctgcacc agatactatt gaattggact tccgggacat tagctttaat 180
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ccatcgggtg ctgggttggg ctcaagcgcc cctattcttg tctactggc cttagctatg 480
gctactttgg ggggtttaat aggatctaat gacttggaaa agctgtcaga aaacgataag 540
catatagtga atcaatgggc ctccataggt gaaaagtgtc ttcaagggtac cccttcagga 600
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gcaaaaaaatt tgaataaaga tottaaaatc aaatccttag tattccaatt atttgaaaat 1260
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```

<210> 5

<211> 1356

<212> DNA

<213> Artificial Sequence

<220>

<221> Description of Artificial Sequence: Synthetic  
Phosphomevalonate kinase nucleotide sequence

&lt;400&gt; 5

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gttttagata caaaatatga agcatttgta gtcggattat cggcaagaat gcatgctgta 120
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aaagaaaaag atccggaaac ttactttgat aaatag 1356

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&lt;210&gt; 6

&lt;211&gt; 1191

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
 Mevalonate pyrophosphonate decarboxylase nucleotide  
 sequence

&lt;400&gt; 6

```

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 <213> Artificial Sequence

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&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
 "MEVT" operon nucleotide sequence

&lt;400&gt; 8

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<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

"MEVB" operon nucleotide sequence

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 <213> Artificial Sequence

<220>  
 <221> Description of Artificial Sequence: Synthetic  
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 nucleotide sequence

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<210> 11  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> Description of Artificial Sequence: Synthetic  
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<210> 12  
 <211> 5051  
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 <213> Artificial Sequence

<220>  
 <221> Description of Artificial Sequence: Synthetic

## "MBI" operon nucleotide sequence

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<211> 5963

<212> DNA

<213> Artificial Sequence

<220>

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"MBIS" operon nucleotide sequence

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Attorney Docket No. 2000-0007  
U.C. Docket No. B02-016  
Serial No. 10/006,909

APPENDIX B

STATEMENT TO SUPPORT FILING AND SUBMISSION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Atty. Docket No: 2000-0007

In re patent application of

KEASLING, JAY et al.

Serial No. 10/006,909

Filed: December 6, 2001

For: BIOSYNTHESIS OF ISOPENTENYL PYROPHOSPHATE



STATEMENT TO SUPPORT FILING AND SUBMISSION IN  
ACCORDANCE WITH 37 C.F.R. §§ 1.821-1.825

Assistant Commissioner for Patents  
Washington, D.C. 20231  
Box SEQUENCE

Sir:

In connection with a Sequence Listing submitted concurrently herewith, the undersigned hereby states that:

1. the submission, filed herewith in accordance with 37 C.F.R. § 1.821(g), does not include new matter;

2. the content of the attached paper copy and the attached computer readable copy of the Sequence Listing, submitted in accordance with 37 C.F.R. § 1.821(c) and (e), respectively, are the same; and

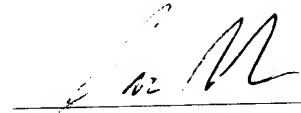
3. all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United

Serial No. 10/006,909

States Code and that such willful false statements may jeopardize the validity of the application or any patent resulting therefrom.

Respectfully submitted,

January 15, 2002  
Date

  
James A. Coburn

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